

# AppleGram

Powerful  
Macintosh Computers  
at a Reduced Price

page 3

## New Low Cost Apple Printers

Apple Computer announces two new printers for individual users that offer low cost, high-quality printing:

- Apple® StyleWriter®
- Apple Personal LaserWriter® LS

With the ability to produce a wide variety of documents, users can print anything—from simple memos to full pages of text and graphics, including scanned illustrations and photographs.

The Apple **StyleWriter** printer makes laser-quality printing of text and graphics more affordable than ever for individual users of Macintosh® personal computers. The StyleWriter is ideal for people who want laser-quality printed results for correspondence or general use. This printer also offers a convenient and very quiet personal printing alternative for people to whom confidentiality is important.

With its sleek design and small "footprint," the StyleWriter printer fits easily in even the smallest spaces.

On average, it prints one half page per minute and up to one page per minute in draft mode.

The StyleWriter is equipped with a detachable sheet feeder that automatically feeds

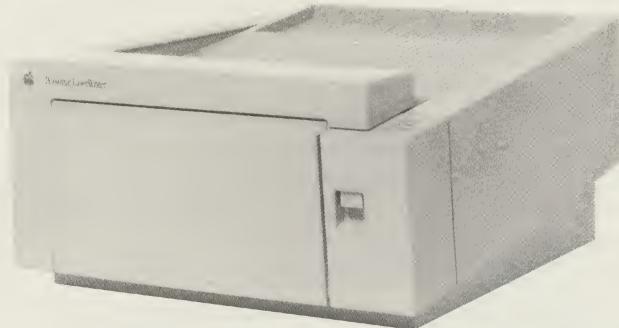
up to 50 sheets of paper into the printer. In addition, it feeds pages manually—with or without the sheet feeder—to simplify printing of single sheets of letterhead, envelopes, labels, or transparencies.

The StyleWriter printer comes with four TrueType™ font families—Times®, Helvetica®, Courier, and Symbol. TrueType, Apple's advanced font technology, allows Macintosh users to print high-quality text in any size, and makes the text on the screen appear smoother and more legible. In addition to the TrueType fonts that come with the StyleWriter, the printer supports a wide variety of TrueType fonts available from other printer suppliers—including text and headline fonts, symbol fonts for special purposes, and novelty fonts for decoration.



The Apple **Personal LaserWriter LS** printer is another low-cost entry to professional quality laser printing. Designed for individual use, this printer provides all of the important benefits customers have come to associate with Apple LaserWriter printers:

- superb printed results for both text and graphics
- the ability to print on almost any material, including labels, envelopes, and transparency film
- compatibility with all Apple Macintosh computers and applications
- "plug-and-play" simplicity



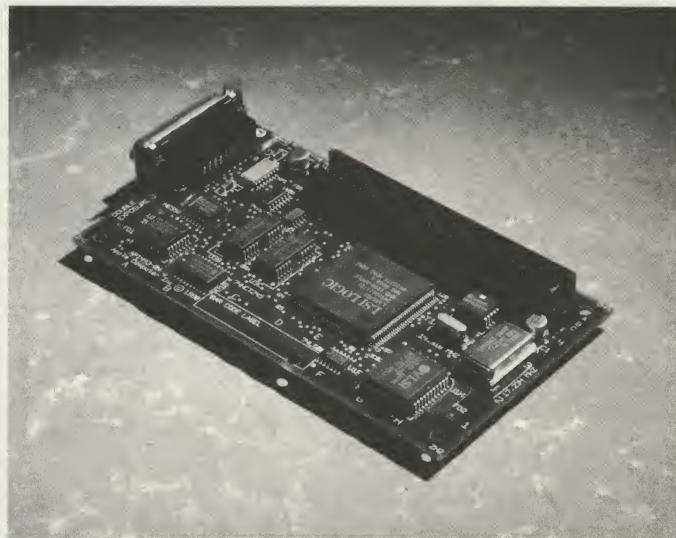
The Personal LaserWriter LS fits easily on any desktop, and comes with a multipurpose tray that makes it easy to print on paper of different sizes and envelopes. For added flexibility, an optional paper cassette permits automatic feeding of up to 250 sheets of paper; an optional envelope cassette provides automatic feeding of up to 15 envelopes.

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# The New Apple Ile Card



The world's largest collection of personal computer software is now accessible to owners of Apple Macintosh LC computers with the new Apple Ile Card. This is especially good news to those who already have a large investment in Apple Ile software, or new computer owners who want to use Macintosh programs, as well as access the large library of more than 10,000 Apple Ile programs for education, home, and business programs.

The Apple Ile Card contains a 65C02 microprocessor, making it virtually an Apple Ile computer on a card. This design allows a high level of compatibility with existing Apple Ile programs. The Apple Ile Card also takes full advantage of the Macintosh LC computer's components, including the monitor, keyboard, and mouse, creating Apple Ile programs in superior color and resolution.

The card is equipped with 128K standard Random Access Memory (RAM) and can take advantage of up to 256K of Macintosh LC RAM. Also included with the Card is the Macintosh software required to operate the Card, a floppy disk drive controller with connector ports for a 5.25-inch floppy disk drive and an Apple joystick.

The second version of the Card's software (which will be available as a free upgrade late summer 1991) will support two ProDOS partitions on a Macintosh hard drive and provide Ile workstation card functionality that runs existing Ile network aware software. It also provides additional printer support.

The Apple Ile Card is available through Apple Authorized Resellers; shipments of the Apple Ile Card will begin at the end of March.

For more information, contact your Apple Authorized Reseller.

Product	Order Number	Suggested Retail Price
Apple Ile Card	M0444LL/A	\$199.00

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## Price Reduction for LaserWriter Printers

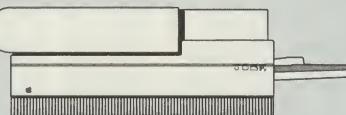
Apple Computer is serious about providing the highest quality, most reliable printers in the business, and now offers an even better value with price reductions on the following LaserWriter printers:

- Personal LaserWriter NT—reduced by \$700 to \$2,599
- LaserWriter IIINT—reduced \$500 to \$3,999
- LaserWriter IIINTX—reduced \$1000 to \$4,999

The price reductions of these printers support our commitment to providing users with a complete, affordable Apple solution for your desktop publishing needs.

Because Apple controls and designs all elements of the Macintosh printing process—a claim no other vendor can make—Macintosh users are assured of a tightly integrated printing solution without the need for any add-ons.

No matter which printer you select, you'll enjoy the benefits that Apple printers deliver: consistent, outstanding print quality; versatility and ease of use; quiet operating levels; and long, dependable service.



Product	Order Number	Suggested Retail Price
Personal LaserWriter NT	B0325LL/A	\$2,599.00
LaserWriter IIINT	M6210	\$3,999.00
LaserWriter IIINTX	M6215/A	\$4,999.00

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## New Printers

*continued from cover*

As with the Apple StyleWriter printer, four TrueType font families—Times, Helvetica, Courier, and Symbol—come with the Personal LaserWriter LS, providing high-quality text in any size and in a variety of sizes.

The combination of high quality and affordability makes the Personal LaserWriter LS an excellent choice for anyone who uses a Macintosh personal computer and wants a convenient, reliable way to produce professional-quality text and graphics for letters, reports, presentations, and charts.

For more information, contact your Apple Authorized Reseller.

Product	Order Number	Suggested Retail Price
Apple StyleWriter	B0438LL/A	\$599.00
StyleWriter Ink Cartridge	M8052G/A	\$22.99
Apple Personal LaserWriter LS	B0454LL/A	\$1,299.00
Personal LaserWriter LS Paper Feeder	M8028G/A	\$120.00

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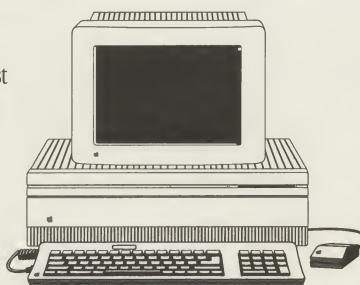
# Reduced Prices, Increased Memory for Powerful Macintosh Computers

Effective March 11, Apple Computer reduces the Suggested Retail Price for its most powerful Macintosh computers:

- Macintosh IIfx—all configurations reduced by \$1,800
- Macintosh IIci—all configurations reduced by \$700
- Macintosh SE/30 HD40 (1MB)—reduced by \$1,000
- Macintosh SE/30 HD80 (4MB)—reduced by \$1,700
- Macintosh IIxi HD40 (3MB)—increased to 3MB of RAM at no extra cost

## The Macintosh IIfx

The Macintosh IIfx computer is the most powerful and expandable model of the Macintosh product line. It offers high performance across all Macintosh applications and is the perfect choice for customers who run advanced applications for 3D design, image processing, financial modeling, or engineering analysis, as well as productivity applications.



A Macintosh IIfx computer with 4 megabytes of RAM and an internal 80-megabyte hard disk—previously listed at a suggested retail price of \$9,869—now sells for a suggested retail price of \$8,069—a 19% price reduction.

## The Macintosh IIci

The Macintosh IIci is the personal computer of choice for customers who use a range of business and productivity applications—including graphics, publishing, and CAD—and who want a system that can grow as their needs grow. The Macintosh IIci offers high performance, built-in color capability, and expandability in a system that takes up very little space on a desk.



A Macintosh IIci computer with 4 megabytes of RAM and an internal 80-megabyte hard disk—previously listed at a suggested retail price of \$6,669—now sells for a suggested retail price of \$5,969. In addition, the standard memory configuration for the Macintosh IIci has been increased from 4 to 5 megabytes of RAM. This additional megabyte of RAM improves performance of the Macintosh IIci computer by up to 30%.

In a recent study by Ingram Laboratories, an independent PC-testing company, the Macintosh IIfx computer outperformed more expensive IBM and Compaq systems running Windows 3.0, including the Compaq Deskpro 486/25 and the IBM PS/2 Model 70 486/25. In the same study, the Macintosh IIci outperformed both the Compaq Deskpro 386/33 and the IBM PS/2 Model 70 486/25. (For complete results of this study, see the February 1991 issue of *AppleGram*.)

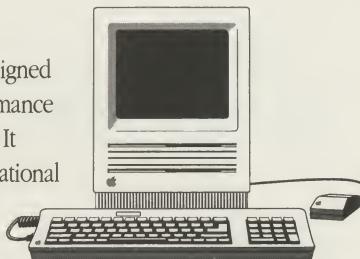
## The Macintosh IIxi

The Macintosh IIxi is ideal for users who need a powerful but affordable Macintosh system that can easily grow with their needs over time. The Macintosh IIxi offers high-performance and a wide range of expansion and video options. It has a 20-megahertz 68030 microprocessor that lets you run Macintosh applications up to five times faster than the Macintosh Classic.

The standard memory configuration for a Macintosh IIxi computer with an internal 40-megabyte hard disk and 2 megabytes of RAM is now increased to 3 megabytes, but at the same low price (see new part number below).

## The Macintosh SE/30

The Macintosh SE/30 computer is designed for users who want maximum performance from an integrated computer system. It provides over three times the computational speed of the Macintosh Classic®, while continuing to offer the benefits that characterize all Macintosh computers.



And now, the Macintosh SE/30 computers are a greater value than ever before. A Macintosh SE/30 computer with an internal 40-megabyte hard disk and 1 megabyte of memory has been reduced from a Suggested Retail Price of \$4,369 to \$3,369. A Macintosh SE/30 with an internal 80-megabyte hard disk and 4 megabytes of memory has been reduced from a Suggested Retail Price of \$5,569 to \$3,869.

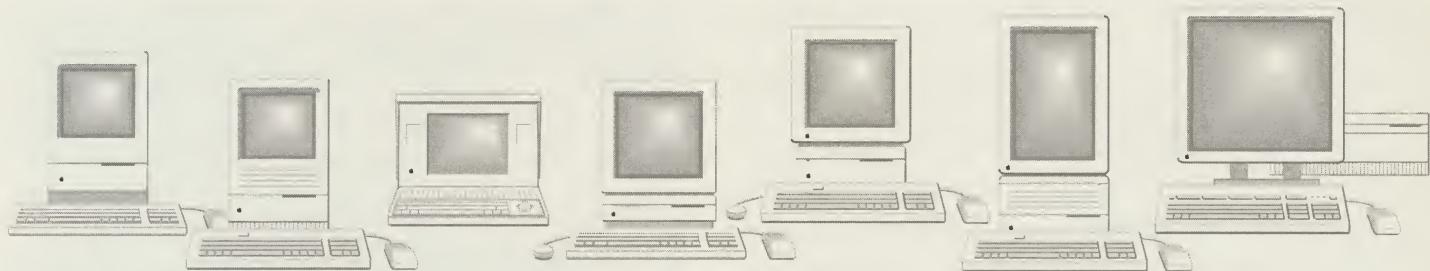
*Note: Pricing adjustments for education have already been made.*

For additional information, contact your Authorized Apple Reseller.

Product	Order Number	Suggested Retail Price
Macintosh IIfx CPU (4 MB)	M5510LL/A	\$7,369.00
Macintosh IIfx HD80 CPU (4 MB)	M5515LL/A	\$8,069.00
Macintosh IIfx HD160 CPU (4 MB)	M5520LL/A	\$8,669.00
Macintosh IIfx A/UX HD160 CPU (4 MB)	B0453LL/A	\$9,269.00
Macintosh IIfx A/UX HD160 CPU (8 MB)	B0471LL/A	\$9,669.00
Macintosh IIci CPU (5 MB)	M5774LL/A	\$5,269.00
Macintosh IIci HD80 CPU (5 MB)	M5775LL/A	\$5,969.00
Macintosh IIci A/UX HD80 CPU (8 MB)	B0452LL/A	\$6,869.00
Macintosh IIxi HD40 CPU (3 MB)	M0491LL/A	\$3,769.00
Macintosh SE/30 HD40 CPU (1 MB)	M5390	\$3,369.00
Macintosh SE/30 HD80 CPU (4 MB)	M5361	\$3,869.00

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# The Family of Macintosh Computers



**Macintosh Classic**  
The completely integrated, most affordable Macintosh system.

**Macintosh SE/30**  
The most powerful member of the Classic Macintosh line.

**Macintosh Portable**  
The desktop Macintosh for people with more than one desktop.

**Macintosh LC**  
The entry-level Macintosh color system that provides solid performance and functionality.

**Macintosh IIxi**  
Performance and flexibility in our most affordable Macintosh II system.

**Macintosh IIci**  
Powerful mainstream Macintosh with a built-in growth path.

**Macintosh IIfx**  
The most powerful Macintosh, with maximum expansion capabilities.



## Macintosh Classic

The Macintosh Classic is a completely integrated Macintosh system with a consistent, graphics-based interface, a built-in monitor, and peripheral expansion ports—all at an affordable price.



## Macintosh SE/30

The most powerful member of the Classic line, the Macintosh SE/30 offers performance over three times that of the Macintosh SE. The SE/30 supports Apple's A/UX operating system, includes an 030 Direct Slot for expansion, and will support the virtual memory feature of System Software 7.0.



## Macintosh Portable

In addition to all the advantages of a Macintosh, the Macintosh Portable includes a full-page-width display and standard Macintosh keyboard in its all-in-one design. The Portable offers twice the performance of the Macintosh SE as well as greater memory expansion.



## Macintosh LC

The most affordable color Macintosh, the LC offers built-in video support for three Apple monitors (the Macintosh 12" RGB and Monochrome Displays and the AppleColor High-Resolution RGB Monitor), sound input, and expansion capabilities, all in a sleek, modular design. It performs up to three times faster than the Macintosh SE and provides Apple IIe emulation through an optional expansion card.



## Macintosh IIxi

The Macintosh IIxi has many of the benefits of the Macintosh LC with even more capabilities. These include higher performance (up to five times that of the Macintosh SE), built-in video support for four Apple monitors (including the Macintosh Portrait Display), support for A/UX and the virtual memory feature of System Software 7.0, on-board memory expansion (up to 17 megabytes), Macintosh II stereo sound output, and an optional NuBus or 030 Direct Slot card with math coprocessor, providing expansion capabilities as well as performance improvements when using math- and graphics-intensive programs.



## Macintosh IIci

The Macintosh IIci combines the built-in video capabilities of the Macintosh IIxi with higher performance and more room to grow. The Macintosh IIci includes a built-in math coprocessor, accommodates a cache card, and has three NuBus expansion slots (for networking, coprocessor, display, and specialized I/O cards).



## Macintosh IIfx

The highest-performance Macintosh, the IIfx uses a 40-megahertz 68030 processor and an advanced memory subsystem, which includes a 32K static RAM cache. The Macintosh IIfx also provides dedicated coprocessors for managing input/output, a Processor Direct Slot, and maximum expandability through six NuBus slots.

The family of Macintosh personal computers allows customers to choose the level of performance that best meets their needs.

And no matter which Macintosh model you select, you'll have a powerful system that outperforms the competition. Independent tests show that, when running the most popular applications, Macintosh computers provide greater performance than competing MS-DOS or Windows-based systems (July '90,

Ingram Laboratories; September '89 and March '90, National Software Testing Laboratories).

But Macintosh computers don't simply outperform other personal computers. Apple provides the power of Macintosh in a consistent and intuitive manner, enabling you not only to do more, but to enjoy it more. Macintosh computers provide consistency across all applications, with more than 3,500 Macintosh applications available today for

business, education, science, and entertainment. You can leverage information and reduce time to learn new applications, as well as preserve your investment in hardware and software.

See your Apple Sales Representative or Authorized Apple Reseller if you have questions about the availability of specific configurations or need additional information.

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# The Family of Apple Printers



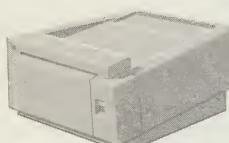
**Apple ImageWriter II**

The reliable, versatile dot-matrix printer for impact printing, for use with Apple II or Macintosh computers.



**Apple StyleWriter**

The convenient, quiet personal printer that delivers laser-quality output.



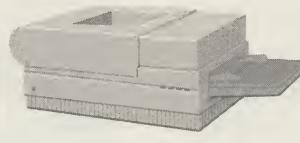
**Apple Personal LaserWriter LS**

Apple's most affordable personal laser printer for professional-quality printing.



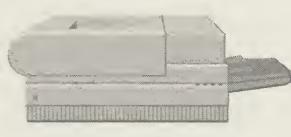
**Apple Personal LaserWriter NT**

The networkable personal laser printer that gives individuals or small workgroups an entry to PostScript printing.



**Apple LaserWriter IINT**

Apple's mainstream, networkable PostScript laser printer for individuals and workgroups. This printer can be upgraded to the LaserWriter IINTX.



**Apple LaserWriter IINTX**

Apple's highest-performance, expandable PostScript laser printer for high-volume workgroup environments.

## Apple ImageWriter II

This versatile dot-matrix printer works with any Apple II or Macintosh computer to produce basic text and graphics. With the optional color ribbon and appropriate software, it also prints in color. The flexible paper-handling features of the ImageWriter II® make it easy to work with envelopes, labels, continuous forms, and multipart forms. You can print up to two-and-a-half pages per minute in draft mode, or choose the near-letter-quality mode for documents with a more professional appearance. With the addition of the ImageWriter II LocalTalk® Option, up to 32 users can share a single ImageWriter II printer on an AppleTalk® network system.

## Apple StyleWriter

This very affordable laser-quality printer is an ideal personal printer for correspondence and general use. The StyleWriter uses Apple's advanced TrueType™ font technology, which allows you to print text in any type size and a variety of styles. It delivers superior, high-resolution (360 dots per inch) printed results at up to one-half page per minute on average, or up to one page per minute in draft mode. It also lets you print on a variety of materials, including letterhead, envelopes, colored stock, labels, and overhead transparency film. With its unique, compact design, the StyleWriter fits easily into the smallest work spaces.

## Apple Personal LaserWriter LS

The Personal LaserWriter LS printer provides individual Macintosh users entry to the world of professional-quality laser printing. It comes with four TrueType font families that can be printed in virtually any size and a variety of styles—for everything from very small footnotes to headlines. The Personal LaserWriter LS gives you fast printing (up to four pages per minute) because of its high-speed, 909K-baud serial interface, and compression/decompression technology. It comes with a multipurpose tray that accommodates different sizes of paper, envelopes, and labels. Optional paper and envelope cassettes let users print up to 250 sheets of paper or 15 envelopes automatically.

## Apple Personal LaserWriter NT

The Personal LaserWriter NT printer offers individuals and small work-groups affordable, high-quality PostScript® laser printing. This compact printer fits neatly into almost any office environment, and has built-in networking capabilities for Macintosh computers. It offers four-page-per-minute printing capability and comes with 12 font families (37 typefaces) that can be printed in a virtually unlimited range of sizes and styles.

## Apple LaserWriter IINT

This is Apple's mid-range PostScript laser printer for individuals and workgroups on AppleTalk network system. The LaserWriter IINT features 11 font families (35 typefaces, scalable to any size), offers eight-page-per-minute printing, and can be upgraded to the capabilities of a LaserWriter IINTX simply by exchanging the controller board.

## Apple LaserWriter IINTX

The LaserWriter IINTX is Apple's highest performance, expandable PostScript laser printer for individuals or workgroups. It's an excellent choice for people in a large network or people who need to produce sophisticated graphics. Because it uses an advanced Motorola 68020 processor, the LaserWriter IINTX prints documents up to four times faster than the IINT. The LaserWriter IINTX also comes with networking capabilities built in, can be expanded to 12 megabytes of RAM, and can support a hard disk for storing more fonts. It comes with 11 font families (35 typefaces) that can be printed in any size and a variety of styles. It is also compatible with Apple II systems.

## Great results

Whether you choose the ImageWriter II printer or the LaserWriter IINTX printer, you can expect excellent printed results for documents ranging from letters and reports to presentations that include sophisticated graphics. And because Apple printers support so many type styles and sizes, you can easily create professional-quality materials with strong visual appeal.

## Compatibility

Because Apple Computer provides a truly integrated printing solution for all Macintosh computers, you can be sure that the printer you choose will work with any Macintosh you're using, or might buy in the future. In addition, four Apple printers—the ImageWriter II, the Personal LaserWriter NT, the LaserWriter IINT, and the LaserWriter IINTX—are compatible with Apple II systems.

## Complete, plug-and-play system

Every Apple printer comes ready to go to work—it takes just minutes to set up and use. All Apple printers come with a variety of fonts, ample memory to support full-page graphics, and support for all Macintosh applications. You don't need to buy additional cables, interface cards, special printer drivers, memory, or font cartridges.

# "Macintosh Computers Have Revolutionized Newspaper Graphics Department"

The Macintosh has "revolutionized the newspaper graphics department" at Knight-Ridder Tribune News Graphics Network. Until recently, if a newspaper wanted to include comprehensive black-and-white or color graphics with a breaking news story, the production constraints were such that finished artwork had to be submitted by noon. If a major event happened after lunch, you could forget the artwork.

Today, thanks in large part to Apple Macintosh desktop publishing technology, the deadline for submitting camera-ready artwork is 8:30 P.M. "Because we can create camera-ready art on the Macintosh, we've gained 8 1/2 hours of preparation time," says George Rorick, director of graphics and technology at Knight-Ridder Tribune News (KRTN) Graphics Network, a partnership between Knight-Ridder and the *Chicago Tribune* that provides on-line information graphics to 500 newspapers in the United States and Europe. In the newspaper business, gaining 8 1/2 hours is like gaining a lifetime.

## Development of the Network

In mid-1985, Knight-Ridder's director of graphics and technology, Roger Fidler, installed a Macintosh 512K computer and an Apple LaserWriter printer in his office and began creating news graphics using Claris® MacDraw software. The LaserWriter was fine for the development of camera-ready art in his own office, but supplying graphics to Knight-Ridder's newspapers across the country presented a problem. Soon it became apparent that he could improve overall efficiency if he could solve the problem of sending data to other sites.

"Previously, newspapers had only two alternatives for sending line art to each other," says Fidler. "There was overnight mail or the wire service's laser photo machine. Unfortunately, the photo machines are designed for photo transmission, so line-art quality suffered and frequently required retouching at the receiving end."

Later in 1985, Knight-Ridder joined with General Electric Information Services Corporation (GEISCO) to help field-test AppleLink, a Macintosh-based network originally designed to link Apple dealers and Apple employees worldwide. Fidler liked the advantages of a store-and-forward system for simplifying the file-transfer process, so he arranged for GEISCO to set up a similar network for Knight-Ridder. In 1988, Knight-Ridder merged with the Chicago Tribune Graphics Service to form the Knight-Ridder Tribune News Graphics Network.

Today, subscribers to the network can access KRTN's services by clicking a PressLink icon that appears on their Macintosh screen and typing in a password. A menu appears that gives users the opportunity to select from a range of different informational services, including the KRTN Graphics Archives, a database of 4,000 graphic images; Step-by-Step Graphics, which includes drawing tips from some of the country's top graphic designers; The Graphic Image Library, which contains the logos of Fortune 500 companies drawn in vector graphics; and KRTN's Daily Graphics.

"The beauty of the system is that it allows subscribers to reshape, resize, color, or otherwise change the graphic element to suit their own needs,"

says Rorick. He estimates that 95 percent of the graphics are created in Claris MacDraw II, though some contributors send files in Adobe Illustrator 88 or Aldus FreeHand. The in-house artists use Macintosh II, IIcx, and IIci computers with large-screen monitors to generate artwork.

In addition to the 15 to 20 news graphics developed each day, KRTN develops approximately 30 "enterprise pieces," comprehensive graphics on major events. These graphics take up as much as a full page of the newspaper. Recent examples include America's Greatest Moment in Space, created to commemorate the anniversary of the Apollo mission, and a graphics spread on IRS tax forms.

KRTN and KRTN Infographic's 500 subscribers include such major newspapers as the *Boston Globe*, the *Miami Herald*, *Chicago Tribune*, the *Orange County Register*, and a number of smaller U.S. newspapers. The subscriber base also includes newspapers in 25 European cities. Efforts are under way to broaden KRTN's ability to share the news graphics produced by European papers with U.S. subscribers.

"Macintosh computers have revolutionized the newspaper graphics department," says Rorick. "Now we can be competitive. We no longer need stat cameras, composing rooms, and airbrushes, and best of all, the graphics look better. Another important aspect of the network is that it makes it possible for papers of all sizes to print graphics. Most newspapers don't have the resources on board that are required to produce information graphics, because it's expensive and time consuming." Adds Fidler, "In an industry notorious for its slow acceptance of new technology, the Macintosh has virtually taken newspapers by storm. It's a de facto standard platform, and I think its influence will only grow as it enters large papers' advertising, promotion, and education departments."

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# A/UX 2.0.1 Now Available

The A/UX operating system from Apple Computer provides access to the familiar, intuitive desktop of the Macintosh computer within the UNIX environment. A/UX version 2.0.1 provides all the advantages of using the Macintosh desktop; the ability to mix and match applications using Macintosh, UNIX and X Window System; and UNIX integration on the Macintosh SE/30 and all Macintosh II class computers. A/UX 2.0.1:

- supports the Macintosh IIsi computer
- includes MacX™ 1.1 software
- supports multiple monitors
- includes the new version of Korn shell (1988)
- meets the IEEE POSIX 1003.1 standard (1990)

With A/UX version 2.0.1 now available on the Macintosh IIsi computer—a low cost Macintosh II class performance machine—you can now have a lower cost UNIX solution including access to X Window System applications. This system provides a full-featured Macintosh computer, industry-standard UNIX, and X terminal capability provided by MacX software.

For first-time purchase, A/UX 2.0.1 is available as:

- a CD-ROM
- a CD-ROM and a set of floppy disks
- a CD-ROM with an AppleCD SC® Drive
- a CD-ROM and A/UX 2.0.1 pre-installed on the following hardware bundles:

Macintosh IIfx (4 MB RAM, 160 MB hard disk)

Macintosh IIci (4 MB RAM, 80 MB hard disk)

Macintosh IIsi (5 MB RAM, 80 MB hard disk)

These products include 30 days of Technical Answerline support and a Basic Manual Kit that includes a *Road Map to A/UX*, *A/UX Essentials*, *Setting Up Account and Peripherals for A/UX*, *MacX User's Guide and MacX for A/UX Supplement*. Customers can also purchase the A/UX Right-To-Copy License that gives them the right to copy A/UX to one additional system. (The Basic Manual Kit can also be purchased separately for customers who need additional manuals for their "copy" systems.)

## Update Products

To update previous versions of A/UX software to version 2.0.1, you can order:

- A/UX 2.0.1 Incremental Update Kit to upgrade from A/UX version 2.0; this kit contains a set of floppy disks and update documentation.
- A/UX 2.0.1 Update CD-ROM, to update versions prior to A/UX 2.0 (including A/UX 1.0 and 1.1).

You can also purchase an A/UX Right-To-Update License that gives you the right to update one additional A/UX system to version 2.0.1.

## System Requirements

A/UX 2.0.1 runs on the Macintosh SE/30 and all Macintosh II computers. When using a Macintosh IIsi, use a NuBus™ or 030 Direct Slot Adapter card. These adapter cards include the Floating Point Processor unit necessary to run A/UX and are used to plug in an additional card for UNIX communications, such as the EtherNet card from Apple Computer. Running A/UX requires a minimum of 4 megabytes of RAM and 80 megabyte hard disk.

For the name of your nearest Authorized Apple Dealer, call 1-(800)-538-9696.

Product	Order Number	Suggested Retail Price
A/UX 2.0.1 CD-ROM	M0598LL/A	\$795.00
A/UX 2.0.1 Floppy Set	M0616LL/A	\$995.00
A/UX 2.0.1 CD-ROM Apple SC Drive	B0411LL/A	\$1,595.00
A/UX 2.0.1 Incremental Update Kit (for version 2.0)	M0516LL/A	\$175.00
A/UX 2.0.1 Update CD-ROM (for versions 1.0, 1.1, and 1.1.1)	M0599LL/A	\$275.00

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# Developer University Classes On Sale

Rarely do universities offer sale prices on curriculum, and even less frequently does a curriculum offer the innovation and interaction of Apple Developer University's self-paced series.

From now through April 1, Developer University is offering the set of all three self-paced classes at a bundled price of \$555, a savings of \$430 from the regular price. Purchased separately, each course is \$100 off regular prices. The self-paced series has two new offerings for 1991: *Macintosh Programming Fundamentals* and *Introduction to Object-Oriented Programming*. Both make extensive use of voice-narrated, fully animated CD ROM technology. Individual prices, good only through April 1, are:

- *Macintosh Programming Fundamentals*—\$495
- *Introduction to Object-Oriented Programming*—\$95
- *Macintosh User-Centered Design*—\$95.

*Macintosh Programming Fundamentals* features 36 interactive lessons to help a novice programmer proficient in C (or seasoned programmers from other platforms) gain the skills needed to program the Macintosh computer. Users see and hear solutions to lab exercises from within the development environment, and can tailor the level of code complexity to match their programming ability.

These multimedia course materials illustrate Macintosh ROM routines and the Application Programming Interface (API) for the Macintosh Toolbox. Users are guided in creating a simple graphics editor consisting of drawing tools, windows, files, printing, and other versatile components of Macintosh applications.

*Introduction to Object-Oriented Programming* is designed to improve programming performance for Macintosh C and Pascal programmers. Object-oriented programming models the natural way people think and solve problems, resulting in code that's often easier to understand, debug, and revise. The course can help users discover how object-oriented programming can reduce development, improve reusability of code, and reduce the cost of maintaining code—particularly for team programmers and for programmers who join a project after its inception. Users can choose to program in C++ or Object Pascal. The bilingual instruction, which requires MPW®, includes an informative videotape that introduces the essential object-oriented programming concepts and demonstrates object design. Program examples demonstrate basic object-oriented concepts such as inheritance, polymorphism, instantiation, and message sending.

*Macintosh User-Centered Design* (not a CD-ROM product) uses an introductory videotape, workbook, and disk-based sample applications with source code to present the superior user-interface techniques and principles central to Macintosh software development, both domestically and internationally. The course is a prerequisite for all Developer

# Developer University Training Schedule

March 1990 — June 1991



## **Macintosh Programming Fundamentals (MPF)**

Mar 18-22 (A)	Cupertino, California
Apr 1-5 (B)	Cupertino
Apr 22-26 (A)	Denver, Colorado
Apr 29- May 3 (A)	Cupertino
May 20-24 (A)	Chicago, Illinois
May 20-24 (B)	Cupertino
Jun 3-7 (A)	Cupertino
Jun 24-28 (B)	Cupertino

## **MacApp & Object Oriented Programming (Pascal)**

April 29- May 3	Cupertino
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## **MacApp & Object Oriented Programming (C++)**

March 18-22	Cupertino
May 6-10	Cupertino
June 10-14	Cupertino

## **Intermediate Macintosh Programming (IMP)**

May 8-10	Cupertino
June 24-26	Cupertino

## **MPW (Macintosh Programmer's Workshop)**

May 6-7	Cupertino
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## **C++ for the Macintosh**

April 8-10	Cupertino
May 20-22	Cupertino

## **Object-Oriented Design/C++**

April 11-12	Cupertino
May 23-24	Cupertino

## **Programming Under System 7.0**

March 27-29	Atlanta, Georgia
April 10-12	Cupertino
April 24-26	Boston, Massachusetts
May 8-10	Cupertino
June 12-14	Detroit, Michigan

## **Data Access Language (formerly CL/1 Fundamentals)**

March 19-21	Edison, New Jersey
May 20-24	Cupertino

## **Technical Introduction to AppleTalk**

April 25-26	Cupertino
June 6-7	Cupertino

## **MacWorkStation**

March 26-29	Chicago
April 30- May 3	Tampa, Florida

For more information on the self-paced series or other classes, contact the Developer University Registrar at 1-(408)-974-6215, or send an AppleLink memo to DEVUNIV.

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University classes, it covers topics ranging from feature extensibility and user testing to productivity tools such as the Toolbox, ResEdit™, and MacApp®. Users will review application designs and compare their evaluations with a panel of experts, checking for use of metaphors, aesthetic integrity, consistency, perceived stability, WYSIWYG, feedback, forgiveness, and user control. The course, which uses HyperCard, is highly recommended for all beginning Macintosh programmers.

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# IMAGINE: The Apple Education TV Series

Imagine taking a statistics course where you can take your data and render it in a graphical, intuitive, and interactive way. Imagine taking a calculus course that is built around interactive Mathematica notebooks.

If you need to analyze data or present data in a visual format, tune in to *Math and Data Analysis*, part of the Imagine: The Apple Education TV Series™, and learn about the latest generation of data analysis and mathematical tools available on the Macintosh. Professors demonstrate solutions ranging from symbolic algebra processors and statistics applications to sophisticated three-dimensional visualization packages. *Math and Data Analysis*, the third broadcast in the Imagine series, airs on March 21 from 1-2 p.m. Pacific Time.

The final program in the series, *Multimedia 201: Beyond the Basics*, airs on April 25 from 1-2 p.m. Pacific Time. This broadcast addresses how to integrate multimedia into the curriculum, and includes multimedia design, prototyping, testing, delivery, and successful organizational strategies for implementing multimedia.

Imagine: The Apple Education TV Series are live television satellite broadcasts that focus on the integration of technology in higher



education. Professionally produced for satellite TV broadcast, each program includes discussions, demonstrations, video roll-ins, and an interactive question-and-answer session. The series broadcast live from Apple's television studio in Cupertino and is available free of charge to university, corporate, or government satellite downlink sites, including over 600 colleges and universities and more than 40 Apple locations around the country. Receiving sites may record broadcasts for additional use.

For more information regarding this program or for the location of satellite coordinates, call the Apple Education TV Series Hotline at 1-(408)-862-1204.

Videotapes of previous broadcasts include:

- *Macintosh in the Classroom*, which addressed the impact of using the Macintosh in the teaching and learning process, covering such topics as collaborative computing, long distance learning, and interactive video.
- *Macintosh Solutions for Administrators* which demonstrates how the Macintosh provides a common user interface to campuswide information—giving easy access to campus information systems such as executive support systems, E-mail, and financial and library systems. Examples are shown from Cornell, the University of Texas at Austin, and Sonoma State University.

To order videotape copies of these programs, contact the Apple Videotape Fulfillment Program (Mediatech West) at 1-(800)-627-0230. Please reference the following information when ordering:

ATV MB 45: *Macintosh in the Classroom* (January 24, 1991)

ATV MB 46: *Macintosh Solutions for Administrators* (February 21, 1991)

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## Price Changes for Customer Training Courseware

Apple Computer announces price changes for its end-user courseware beginning March, 1991:

- All courses are available for volume purchase, with
- price reductions on interactive video courseware including the Macintosh Fundamentals 2.0, *Network Administration Skills 1.0*, and *Introduction to Desktop Publishing and Presentations 1.0*

Customer Training's courseware consists of leader-led applications, self-paced, and interactive video courseware. These materials are sold to Apple Authorized Training Centers (AATC), Apple Training Alliance (ATA), Training Associates (TA) programs. To locate the nearest training provider in your area, call 1-(800)-732-3131, extension 300.

For additional information, contact an Apple Authorized Training Provider, check the Customer Training icon on AppleLink, or send an AppleLink memo to CT. ADMIN.

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